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EDSAT Institute

Education • Schools • Telecommunications

GRANT NAGW-2713

FINAL TECHNICAL REPORT

BACKGROUND

There is a well-documented crisis in American education. At a time when this nation's students are testing at, or close to, the bottom of international standards in math, sciences, and languages, the U.S. Chamber of Commerce estimates that 42% of the nation's workforce (49.5 million workers) will need retraining over the next ten years to keep pace with employer skill demands. Not included in this number are the approximately 37 million workers who will need entry-level training.

Additionally, President Clinton, Congress and the nation's governors have adopted education goals for the year 2000 which would have every adult literate, possess the knowledge and skills necessary to compete in a global economy, and exercise effectively their rights of citizenship.

As the nation confronts these formidable challenges armed with teacher shortages, retraining needs, budget deficits, mounting problems for youth-at-risk, and escalating costs for delivering programs to the unserved and underserved, there can be no question that states and the federal government must consider only the most cost-beneficial use of public resources and teachers if we are to succeed in achieving our education goals.

NASA's general objectives to better understand how distance education can hold great promise for the achievement and implementation of our national education goals. The EDSAT Institute shares NASA's interests through the development of better understanding of how access and utilization of satellite services can improve the delivery of educational programming, teaching, and overall educational resources.

An outreach effort can develop information on a cost-effective, satellite-based telecommunications system linked with existing cable and telephone lines. It is anticipated that such a system will afford an opportunity for improving the delivery of math and science instruction to all youth, regardless of the wealth

1735 I Street, N.W. • Suite 601 • Washington, D.C. 20006 • (202) 293-4211 • FAX (202) 293-4210

of their school, their geographical location, or the density of population.

The EDSAT Institute is a non-profit, tax exempt educational and research organization founded in 1988 to encourage the access and utilization of telecommunications in all forms throughout America's schools, colleges, universities, library systems and state agencies.

PHASE I - 1989-1991

Kentucky Governor Wallace Wilkinson proposed to President Bush at the Charlottesville Educational Summit in 1989 that a public-domain satellite dedicated to education be built and launched as a partnership effort between the states and the federal government. The EDSAT Institute agreed to review the relevant legal, fiscal, operational and policy issues and to recommend options for organizational structures to govern, manage, and utilize a dedicated satellite system in a manner that would ensure its appropriate and equitable use.

Two Working Groups were organized to directly involve representatives of the various stake-holders, such as the states, the education community, federal agencies, the Congress, satellite and communication industries, and other interested parties. The Technical Issue Working Group focused on the technical aspects of the proposal and was chaired by Dr. Peter Likens, President of Lehigh University and member of the Board of Directors of the COMSAT Corporation. The Policy and Governance Working Group focused on the legal, fiscal, and governance aspects of the proposal. It was co-chaired by Dr. Joseph Duffey, President of the American University, and former U.S. Representative John Buchanan, Jr. of Alabama. This group was to respond to alternative approaches to the governance and management of one or more public domain satellites dedicated to instructional functions or activities to be used by educational institutions (preschool through graduate school) and adult learning programs.

Dr. Robert Brown, Director of the Education Affairs Division, Office of External Affairs, and William Nixon, former Manager of the Education Technology Branch, NASA along with representatives from the Departments of Education, Commerce, and Defense participated, along with others in the Working Group sessions.

Upon completion of the Working Groups' meetings and research, the EDSAT Institute released the report on February 26, 1991, entitled, "An Analysis of a Proposal for an Education Satellite". The report found that

"...under the present system schools, colleges, universities, and

libraries are left without low-cost, predictable, and equitable access to satellite services."

It found at least 111 education program providers delivering programs by satellite and that 20 of the largest program providers to educational institutions were expected to purchase more than 75,000 hours of transponder time during the 1990-91 school year. These 20 represent--at best--18% of the education purchasers of transponder time. Although the total expenditures

could not be confirmed, it was estimated that states and educational institutions expended more than $50 million in the school year 1990-91 to purchase satellite time.

The response to the EDSAT report was overwhelming and came from more than 33 states. Those responding included state agencies, educational institutions, educational satellite buyers, libraries, teachers, administrators, and others. Outside the country, program providers from Alberta, Ontario, Nova Scotia, the United Kingdom, South Africa, and Mongolia were heard from.

PHASE II - A SERIES OF REGIONAL OUTREACH MEETINGS - 1991-1992

In direct response to the problems stated above, the findings of the EDSAT Working Groups, and responses to the report, the EDSAT Institute conducted seven regional outreach meetings (EXHIBIT "A") to convene key regional stakeholders to discuss and gather feedback on the governance, management, and operations of a satellite-based telecommunications system dedicated to education (EXHIBIT "B").

Invitees to these nation-wide meetings included governors' representatives, key state legislators, higher education representatives, school board members, state superintendents, state agencies, educational satellite buyers, public education representatives, instructional T.V. program providers, congressional representatives, and key community leaders from the private and public sectors. Over 3500 persons were contacted with approximately 350-400 persons in attendance (EXHIBIT "C").

A survey instrument (EXHIBIT "D") was distributed at each meeting to enable the Institute to compile and assess the current and projected future needs of the states and educational institutions for satellite services. EDSAT received approximately 320 responses to this survey instrument.

Co-sponsors for the outreach meetings included the Missouri School Boards Association, the Education Satellite Network, the Oklahoma State University College of Arts and Sciences Teleconferencing Services, the OSU Institute for Telecommunications, the Black College Satellite Network, the

California State University at Chico, the University of California at San Diego, the University of California System, Office of University Relations, Oregon ED-NET, the Massachusetts Corporation for Educational Telecommunications, the Boston Museum of Science, Scientific Atlanta, and COMSAT, Inc.

Phase II also included analysis of the outreach discussions and survey results. They were:

> There was overwhelming support for the creation of a National Education Telecommunications Organization (NETO); to include a small one-time member fee; whose purpose would be to provide education, programs, research, and satellite services to help create an integrated infrastructure dedicated to education.

EXHIBIT "A"

EDUCATION WEEK - JUNE 6, 1991

Regional Hearings To Consider Education Satellite

By Peter West

WASHINGTON—State and local officials hoping to advance a proposal to dedicate a satellite to educational uses will hold a series of regional meetings on the idea beginning later this month.

The seven meetings have been scheduled to decide what next steps should be taken to further the proposal, Shelley Weinstein, executive director of the nonprofit EDSAT Institute, said last week.

"We decided that we should go to the grassroots and discuss what is the best way to go," she said. The meetings are not designed to address the issue of funding, she added.

The two-day sessions will be open to Congressional leaders, state precollegiate- and higher-education officials, educational broadcasters, satellite vendors, and other interested parties.

The decision to hold the meetings was prompted, Ms. Weinstein said, by an outpouring of interest in the findings of a feasibility study on the concept that the EDSAT Institute, based here, issued earlier this year. *(See Education Week, March 13, 1991.)*

Since the report was published, she said, officials from 33 states have asked for more information.

"The single factor that was identified as most important to them was the rising and unpredictable costs of their [current] satellite time," Ms. Weinstein said.

National Organization?

Gov. Wallace G. Wilkinson of Kentucky broached the concept of dedicating a satellite to educational use with President Bush during the 1989 education summit in Charlottesville, Va. Mr. Wilkinson has won support for the concept from the National Governors' Association.

Jack Foster, Kentucky's secretary of education and the humanities, said the regional meetings may eventually help create a multi-state governing board to guide the project.

"We think now, based on what we've heard, that the country is ready for some sort of a national organization to do this," he said.

The first meeting is scheduled for June 27 and 28 in St. Louis. Others are planned for Dallas, July 25 and 26; San Francisco, July 29 and 30; Salt Lake City, Aug. 1 and 2; Boston, Aug. 8 and 9; Atlanta, Aug. 14 and 15; and Baltimore, Aug. 26 and 27.

DRAFT

SCHEDULE FOR EDSAT OUTREACH ACTIVITIES

HOST CITY *	WEEK OF	6/24 - 28	7/22 - 28	7/29 - 8/2	8/5 - 9	8/12 - 16	8/26 -8/30
St. Louis, Missouri		27th & 28th					
Dallas, Texas			25th & 26th				
San Francisco, California				29th & 30th			
Salt Lake City, Utah				8/1 & 2			
Boston, Massachusetts					8th & 9th		
Atlanta, Georgia						14th & 15 th	
Baltimore, Maryland							26th & 27th

* Host City includes:

Baltimore, Maryland
- Virginia
- West Virginia
- Maryland
- Pennsylvania
- New Jersey
- Delaware
- District of Columbia

St. Louis, Missouri
- Missouri
- Kansas
- Nebraska
- Minnesota
- Wisconsin
- Michigan
- Indiana
- Ohio
- Kentucky
- Iowa
- Illinois

Dallas, Texas
- Texas
- Arizona
- New Mexico
- Oklahoma
- Arkansas
- Louisiana

San Francisco, California
- California
- Hawaii
- Pacific Rim Islands

Salt Lake City, Utah
- Utah
- Idaho
- Washington
- Nevada
- Wyoming
- Montana
- North Dakota
- South Dakota
- Colorado
- Alaska
- Oregon
- British Columbia

Boston, Massachusetts
- Maine
- New Hampshire
- Vermont
- Connecticut
- Massachusetts
- Rhode Island
- Canada
- Nova Scotia
- New York

Atlanta, Georgia
- Mississippi
- Alabama
- Georgia
- Florida
- Tennessee
- South Carolina
- North Caro

INFORMATION SHEET ABOUT EDSAT'S REGIONAL MEETINGS

PURPOSE: The purpose for these meetings is to convene the key regional stakeholders in a discussion on the shaping and development of an organization to govern and manage a satellite-based telecommunications infrastructure dedicated to education.

PARTICIPANTS: Invitees will include governors' representatives, key state legislators, higher education representatives, school board members, state superintendents, state agencies, education satellite buyers, instructional T.V. program providers, congressional representatives and key significant others.

MEETING CO-SPONSORS: Every effort is being made to have co-sponsors for each regional meeting. Co-sponsors are providing lists of invitees and assisting with logistical arrangements, wherever possible. National education organizations are also assisting EDSAT and co-sponsors with invitee lists.

EDSAT Institute: Letters of invitation will be mailed by EDSAT Institute. Invitees will be asked to r.s.v.p. at the EDSAT office and/or a co-sponsor office, wherever co-sponsor can make staff available. EDSAT will provide materials, agenda and presentors for the meetings.

NUMBERS OF PARTICIPANTS: It is anticipated that approximately 40 to 50 persons will attend each regional meeting, with some variations. Participants will be invited to attend the meeting in a city assigned to their region. However, invitees may attend a meeting in any location that may happen to be more convenient for their travel schedule. (See attached Host City schedules.)

MEETING SCHEDULES: The meetings will include an opening afternoon session, approximately four hours in length and a closing morning session, approximately four hours in length. It is anticipated that the afternoon sessions will begin around 1:30pm and end around 5:30pm. The next morning session will start with continental breakfast at 7:30am and end at approximately 11:30am.

PARTICIPANTS' COSTS: Participants will make arrangements for their travel, hotel and meal costs. Information on two or three desirable restaurants for dinner will be available during the meeting. Small groups will be encouraged to gather at dinner for further discussion on the upcoming morning session.

RECEPTION AND LUNCHEON: A wine and cheese informal reception at the end of the first day and/or a closing luncheon is a desirable addition if local corporate or institutional support is available.

MEETING FORMAT:

Opening afternoon session:
Discussion/classroom or informal theater settings.
Presentors will be informal and brief to allow ample opportunity for individuals to identify themselves and discuss programs and problems with access and utilization of instructional T.V. programs.
(Soft-drinks and coffee available during afternoon-break.)

Closing morning session:
The second session will begin with continental breakfast.
Depending on the numbers of participants and facilities the meeting can continue in the same room or move to a meeting room.
This session will include presentations and discussion on a national organization for educational satellite services, its purpose, functions and structure.
Closing will include information on follow-through and next step

EXHIBIT "B"

DRAFT

A DISCUSSION PAPER
ON:

A PLAN TO CREATE A NATIONAL EDUCATION TELECOMMUNICATIONS ORGANIZATION

An Education Satellite System is Feasible

The EDSAT Institute analyzed the proposal for a public domain education satellite system and confirmed its technical and financial feasibility.[1] A market for an education satellite already exists, but it is highly fragmented at the present time. The study found there are at least 111 providers of satellite-based educational programming. Of this number, twenty of the major ones will purchase more than 75,000 hours of satellite time in the 1990-91 school year.

While it was difficult to determine the distribution of programming at specific hours of the day, days of the week and months of the year, it is highly likely that at some point all twenty of these agencies will want to transmit programming at the same time. Concurrent programming by just these twenty agencies would create a peak demand for twenty transponders--nearly 84 percent of the capacity of a 24 transponder satellite.

The EDSAT Institute examined the financing alternatives for a public domain satellite. Public financing of an education satellite requires either a direct appropriation from the Congress, the contribution of an existing federal satellite, or appropriations by state legislatures. Private financing is feasible if the entity which takes ownership of the satellite, or guarantees a long term lease for its use, has a cash flow sufficient to assure payment or there is a governmental guarantee of such payment in the event of default.

Although the actual size of the education market is unknown, the EDSAT Institute analysis indicates that it is substantial. It is estimated that twenty major education program providers will spend about $45.5 million during the 1990-91 school year for satellite time. It is plausible to assume that the expenditure by all educational agencies is substantially more than $50 million per year, since these twenty agencies represent only eighteen percent of the 111 purchasers.

A cash flow of this magnitude should be sufficient to support a single satellite if it can meet the peak time demand of the agencies using it. While federal funding for an education satellite might be available at some future time, the project need not be contingent upon it. The project could be self-financing if the buyers had an appropriate vehicle for securing, governing and managing the use of the satellite.

The inability to confirm the number of purchasers and how much time they would use constitutes a major obstacle to the immediate acquisition

of a satellite for education regardless of how it is financed. Neither the actual amount of transponder time needed nor the technical configuration (C-Band and Ku-Band) of the satellite could be determined. Obviously, decisions about the design, construction and launch of an education satellite cannot be made until these questions are answered. The documented usage of satellites for instructional programming indicates that there presently exists a market large enough to justify at least some form of cooperative management and purchase of transponder time. For the longer term, it sets the stage for the eventual acquisition of a satellite dedicated to education.

The Need for Action Now

There is legitimate concern among the stakeholders that something be done now to lower costs and provide predictable access for those education agencies which presently are using satellites or have a strong interest in doing so. The governors, the president and the congress are seeking innovative ways to achieve national education goals. Satellite technology can play an important role in such a strategy because it can provide access to multiple education programs of an interactive nature simultaneously to every part of the nation at a relatively low unit-cost.

In the present commercial marketplace, the rising and unpredictable costs of transponder time are at best limiting the use of televised instruction in rural and often poor school districts; at worst, some school districts are beginning to reduce availability of these instructional resources. A strategy is needed that will enable education agencies to secure many of the benefits of a dedicated satellite now while planning continues for the building and launch of such a satellite in the future.

A STRATEGY FOR SECURING AN EDUCATION SATELLITE

A feasible strategy for development of a dedicated satellite system is to first aggregate the present education expenditures for transponder time through an organization made up of purchasers. Such a step would enable users to migrate to a single satellite and obtain low, uniform rates regardless of the amount of usage--all of which are important reasons for having a satellite dedicated to education. This strategy is a first step toward achieving the goal of securing a dedicated satellite for education. It will give the participating agencies valuable experience in managing the use of a satellite while documenting the cash flow available to underwrite private financing of a dedicated satellite if this should be necessary. Both are necessary to proving the long term viability of the project regardless of how it is ultimately financed.

Two steps need to be taken concurrently. One step in implementing this plan is to form an organization of buyers of satellite time.

Such an organization, which might be called the National Education Telecommunications Organization (NETO), can be incorporated in a member state or the District of Columbia as a non-profit public purpose corporation. Alternatively, the Congress can be asked to charter it as a national organization. A national charter gives the organization national standing and the backing of the Congress of the United States. In either case, NETO would be under the direction of a representative Board of Governors which would set policy for the satellite system.

A second step in the plan is to create a non-profit subsidiary operating company to manage the satellite system. The Corporation would become a legal subsidiary wholly owned by NETO and function as a telecommunications vendor on behalf of the membership. The NETO Governing Board can name the Corporation's Board of Directors which in turn would hire a professional management team for the Corporation.

The rationale for proceeding in this manner is based on the following concepts and assumptions. The most immediate stakeholders are the buyers of satellite time. These agencies will directly benefit from participation in the system and represent the most logical basis for organizational membership. Presumably any non-profit educational agency could be a member of NETO. Membership dues might be required initially to provide working capital for NETO and the Corporation. Thereafter, an "initiation" fee might be required of new members similar to what the charter members invested in the organization.

The rationale for two organizations -- NETO and the Corporation -- rests on the premise that policy for the use of the satellite(s) should rest with a body representative of the membership. However, the business management should rest with an organization which can function like any private telecommunications vendor. A similar model exists in INTELSAT where each participating country has its own satellite operating company but the system is governed by a Board of Governors representative of the political jurisdictions which have ownership in the system.

Although this strategy doesn't lead directly to the launch of a "dedicated public domain satellite," the major benefits of such a satellite can be secured now. By pursuing this course of action, five objectives of an education satellite system can be met almost immediately: (1) an equitable pricing structure for all users; (2) priority access to a satellite; (3) the cost advantage of bulk purchase even for occasional users; (4) assessment of the kind of satellite that is needed and the time and nature of its use; and (5) a documented cashflow to support a dedicated satellite in the future.

CREATION OF A GOVERNING STRUCTURE

Policies regarding utilization of the system, its financing and future development need to be established by a body representative of the "stakeholders" who in this case are the elected state officials and heads of

education agencies which have a direct stake in the success of the system. A governing board should be created to ensure that the operating company serves the public purposes intended for the education satellite system. Designing an appropriate structure for governing the system is a matter of determining who should control what decisions. The decisions to be controlled in this instance would seem to be these:

1. The price of satellite time:
2. Schedules and priorities for satellite time;
3. Equitable access to the satellite;
4. Budget, contracts and debt;
5. Ownership of assets;
6. Acquisition and design (configuration, capacity, band, etc.) of satellites;
7. Expansion, dissolution or sale of the system; and
8. Operational policies and procedures of the organization.

Other matters such as encouraging greater use of the satellites, monitoring changes in technology, and anticipating future needs are more appropriate for the organization's management rather than governance body to deal with. The cost of the NETO Secretariat can be financed by the Corporation from revenues it generates from the sale of transponder time.

CREATION OF A MANAGEMENT COMPANY

The Board of Directors for the Corporation should be elected or appointed by the NETO Board of Governors, but the operating company should be managed by people with experience in the satellite communications industry. The company will have to be capitalized and operate on the basis of revenues it generates from the sale of time on the transponders it acquires.

The initial task of the operating company is to secure from a satellite communications vendor transponder leases on an inflight satellite for the use of members of NETO. The Corporation then contracts with members for use of the transponders according to policies established by the NETO Board of Governors. The Corporation management would ensure that sufficient transponder time is available to meet the needs of all members, but any conflicts in scheduling would be resolved according to policies set by the Board of Governors.

It is envisioned that members would only pay for actual time used but at a uniform rate thus ensuring equitable access. However, rates would need to be sufficient to ensure the lease payments. Management could sell unused time to nonmembers at commercial rates which would accrue to the benefit of NETO members. Receipts in excess of expenses can be held in reserve to protect against future shortfalls or to offset future increases in operational costs. Over the next several years the Corporation can establish

the cashflow record necessary to assure sound financing of a dedicated satellite. In the interim, the Corporation can determine the size and technical features of a dedicated satellite desired by the participating agencies.

THE EDSAT IMPLEMENTATION PLAN

The EDSAT Institute is prepared to orchestrate the creation of the National Education Telecommunications Organization and the operating Corporation. The Institute will conduct seven regional meetings of potential membership organization and agencies to secure their support for the creation of the NETO. A consensus organizational charter and by-laws will be developed with participation of key charter member organizations. A national effort will then be undertaken to secure members and launch the new organization before the end of 1991.

Parallel to these organizational activities, the EDSAT Institute also will work to create the Corporation. An interim Board of Directors can develop a business plan for consideration by prospective members of NETO. The Corporation also can begin negotiations with prospective satellite vendors and satellite-based communication companies to secure transponders that can be used by NETO members. As rapidly as feasible, member organizations will migrate to the Corporation satellite and begin enjoying the benefits of collective buying power and access to a satellite dedicated to their use.

NOTES

1. EDSAT Institute. Analysis of a Proposal for an Education Satellite. Washington, D.C., 1991

EXHIBIT "C"

, 1991

Dear :

On February 26, 1991 the EDSAT Institute released an Analysis of a Proposal for an Education Satellite. In light of the findings of this report, the Institute has scheduled a series of meetings to determine the level of interest and support for an educational satellite among those who would most directly benefit. The meetings will focus on the next steps to secure, govern, and manage satellite resources for the education community. Enclosed is a discussion paper for use in these meetings.

The EDSAT Institute and Scientific Atlanta are pleased to invite you, a key stakeholder in education and telecommunications, to the Atlanta meeting on August 14th and 15th, 1991.

The meeting will be held at the Atlanta Marriott Marquis Hotel at 265 Peachtree Center Avenue. It will begin at 1:30 pm on Wednesday August 14 and close at approximately 11:30 am on Thursday, August 15, 1991. Participants are responsible for making their own travel and room arrangements. A special room rate has been arranged, so please mention the EDSAT meeting when making your reservations (404-521-0000).

If your summer schedule does not permit attendance in your region, please feel welcome to attend the Baltimore meeting. Along with an overview of the agenda, we have included the dates of all the meetings for your use.

Your participation at this meeting is important. Please call or fax my office with your response at the earliest possible time. The telephone number is 202-223-5448 and the fax number is 202-429-9392.

Once again, we do look forward to your participation.

Sincerely,

Shelly Weinstein
President

SW/cb
enclosures

EDSAT Institute

Education • Schools • Telecommunications

PRESS ANNOUNCEMENT

IMMEDIATE RELEASE:

FOR FURTHER INFORMATION, CONTACT:

BILL STERN (202) 333-4040

EDSAT INSTITUTE TO CONDUCT SEVEN REGIONAL MEETINGS

WASHINGTON, D.C., June 27 -- As a result of the February 26, 1991 release of the Washington, DC based EDSAT Institute's ANALYSIS OF A PROPOSAL FOR AN EDUCATIONAL SATELLITE, the organization will hold seven regional meetings in order to present its key findings on the future of education directly to state leaders and all interested parties. Those who have been invited to attend the meetings are state governors' representatives, key state legislators, higher education representatives, school board members, state superintendents, state agencies, education satellite buyers, instructional television program providers, U.S. and state congressional representatives and all key significant others.

"The specific purpose of the seven regional meetings is to provide timely information and details that will bring together the key regional stakeholders in order to be informed on the urgency for shaping and developing of an organization to govern and manage

-MORE-

* Director

a satellite-based telecommunications infrastructure dedicated completely to education," said EDSAT Institute President, Shelly Weinstein.

The seven regional meetings, that kick off in Saint Louis, Missouri today, have been planned and developed so that all interested parties, from all 50 states, will have the opportunity to attend the Meeting that is geographically closest to them. The Meeting schedule, which will continue through July and August, begins at noon today in Saint Louis, with the first of its two-session agenda. The Meeting Schedule continues on to Dallas, Texas (July 25-26), San Francisco, California (July 29-30), Salt Lake City, Utah (August 1-2), Boston,Massachusetts (August 8-9), Atlanta, Georgia (August 14-15), and concludes in Baltimore, Maryland (August 26-27). Representatives from all 50 states have been invited to attend one of these meetings. "We anticipate that approximately 40 to 50 people will attend each regional meeting. Participants have been invited to the city in their region, however anyone may attend a meeting in any location that may be more convenient. Each meeting will include an afternoon session that will be an information-packed four hours and will conclude after a second session the following morning," said Weinstein.

The EDSAT Institute is a non-profit tax exempt educational and research organization founded in 1988 to encourage the access and utilization of telecommunications in all forms throughout America's schools, colleges, universities, and libraries. The EDSAT Institute is supported through private gifts, grants and contracts. The work of the Institute is conducted under the policy guidance of the Advisory Board members.

-END-

EXHIBIT "D"

EDUCATION SATELLITE SURVEY

The EDSAT Institute
400 N. Capitol Street N.W., Suite 550
Washington, D.C., 20001
(202) 508-4484 or FAX (202) 508-4978

INSTRUCTIONS: Please complete this survey and return it to the EDSAT Institute as soon as possible. The information will be compiled by the Institute staff at the conclusion of the regional meetings and will be the basis for determining the feasibility of creating a satellite-based telecommunications system for instructional purposes.

---

1. Would your organization want to be a member?

1 ☐ Yes
2 ☐ Uncertain, but would like to be
3 ☐ Uncertain, but unlikely in the near future
4 ☐ No

REMARKS:

2. How should the organization be financed?

5 ☐ Dues paid annually by members
6 ☐ Dues paid annually based on usage of the satellite
7 ☐ A surcharge of up to 1% on fees paid for satellite use
8 ☐ The federal government should fund it
9 ☐ State governments should fund it
10 ☐ Other _____

3. Would the payment of dues for membership be critical to the decision to join such an organization?

11 ☐ Yes
12 ☐ Perhaps
13 ☐ No

4. If dues were considered necessary to support the organization, at what point would they be too high to justify membership?

14 ☐ Greater than $100 per year
15 ☐ Greater than $500 per year
16 ☐ Greater than $1,000 per year
17 ☐ Greater than $2,500 per year
18 ☐ Greater than $5,000 per year

5. Your organization

19 ☐ purchases *uplink* satellite time only for your own use
20 ☐ purchases *uplink* satellite time for yourself and others
21 ☐ purchases *uplink* satellite time only for other organizations
22 ☐ uses *uplink* satellite time purchased by another organization
☐ does not use *uplink* satellite time

6. Estimate your *maximum* demand for satellite time:

	90-91		91-92	**September 1 through May 31**
23	_____	24	_____	hours per day
25	_____	26	_____	hours per month
27	_____	28	_____	hours total for this time period
	1991		1992	**June 1 through August 31**
29	_____	30	_____	hours per day
31	_____	32	_____	hours per month

7. Estimate your *average* demand for satellite time

	90-91		91-92	**September 1 through May 31**
33	_____	34	_____	hours per day
35	_____	36	_____	hours per month
37	_____	38	_____	hours total for this time period
	1991		1992	**June 1 through August 31**
39	_____	40	_____	hours per day
41	_____	42	_____	hours per month

8. Estimate your *average* demand for satellite time:

	1991		1992	Saturdays, Sundays and Holidays
43	_____	44	_____	hours on Saturdays
45	_____	46	_____	hours on Sundays
47	_____	48	_____	hours on Holidays

9. Do you *now* lease one or more transponders 24 hours per day all year?

49 ☐ None 50 ☐ One transponder
51 ☐ Two transponders 52 ☐ Three or more transponders

10. If an organization were created to permit collective purchasing of satellite time, state the earliest date you could begin purchasing through this organization?

53 The earliest date is _____

11. Which of the following affect the beginning date?

54 ☐ Existing contracts must expire
55 ☐ Technical problems changing uplink orientation
56 ☐ Technical problems changing user downlink orientation
57 ☐ Cost of making technical changes in transmission
58 ☐ State laws or regulations affecting the purchasing of satellite time
59 ☐ Other _____

12. What hourly rate would come closest to your present *average* cost per hour for satellite time?

60 ☐ $200 to $249 61 ☐ $250 to $299 62 ☐ $300 to $349
63 ☐ $350 to $399 64 ☐ $400 to $449 65 ☐ $450 to $499
66 ☐ $500 to $549 67 ☐ $550 to $599 68 ☐ $600 or more

13. What kind of satellite transmission do you currently use for *uplink*?

69 ☐ C-Band 70 ☐ Ku-Band 71 ☐ Both

14. What kind of satellite transmission dishes do your clients use for *downlink?*

72 ☐ C-Band 73 ☐ Ku-Band 74 ☐ Both
75 ____% Steerable 76 ____% Non-steerable 77 ☐ Don't Know

15. What type of transmission capability would you *require* on any satellite(s) leased or acquired by the organization?

78 ☐ C-Band 79 ☐ Ku-Band 80 ☐ Both

16. Indicate the programmatic usages you would desire.

81 ☐ One-way Broadcast Video-Audio 82 ☐ One-way Video/Two-way Audio
83 ☐ Two-way Video/Audio Interactive 84 ☐ Multipoint Video Conferencing
85 ☐ Data transmission 86 ☐ Telephonic transmission

17. What usage do you make of digital compressed video technology?

87 ☐ Not currently in use and not anticipating its use anytime soon
88 ☐ Under consideration but no plan for its use in the near future
89 ☐ Plans underway for use within the next 24 months
90 ☐ Limited use at the present time
91 ☐ Extensive use at the present time

18. What percentage of your *annual* satellite usage is for programs produced *primarily* for the following audiences:

92 ____% K-12th Grade Schools
93 ____% Colleges and Universities
94 ____% Vocational & Technical Schools
95 ____% The Workplace
96 ____% Home Viewers
97 ____% Other _____

Please provide to us any information you may have regarding the number and demographics of the users of programs you deliver via satellite. Also, please write below (or attach to this survey) any additional information you think it is important for us to have which we did not request.

Thank you for taking the time to provide this information.

NAME OF RESPONDENT _____

ORGANIZATION _____

ADDRESS _____

_____

CITY _____ STATE ____ ZIP _____

TELEPHONE ( ) _____

FAX NUMBER ( ) _____